Module 3 TRN CULTURAL SENSITIVITY, Learning Unit 3.3. Working together

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THEORETICAL COMPONENT

Principles and Values

The learning unit is founded on the core principles from medical ethics (autonomy, beneficence, non-maleficence, justice) and the general principles and values for the IENE 10 associated with culturally competent and compassionate care:

- co-operation
- commitment
- communication
- kindness
- acceptance
- empathy
- friendship/relationship, encouragement
- ensuring patient dignity.

Aims

This learning unit aims to enhance the understanding of human-robot collaboration of all involved in the care of patient/client- family, caregiver, professionals, robot, and client themselves.

Learning outcomes

At the end of this training, the participants will:

- Increase knowledge about elements of effective collaboration between the patient/client and different stakeholders and SARs.
- Enhance skills to ensure the quality of patient/client care.
- Better understand the benefits of effective teamwork between the patient/client, formal care staff, family members, and SARs in health and social care.

Relevant definitions and terms

Alzheimer's disease (AD). Alzheimer's disease (AD) is a neurodegenerative disease that usually starts slowly and progressively worsens. The most common early symptom is difficulty in remembering recent events. As the disease advances, symptoms can include problems with language, disorientation (including easily getting lost), mood swings, loss of motivation, self-neglect, and behavioral issues.

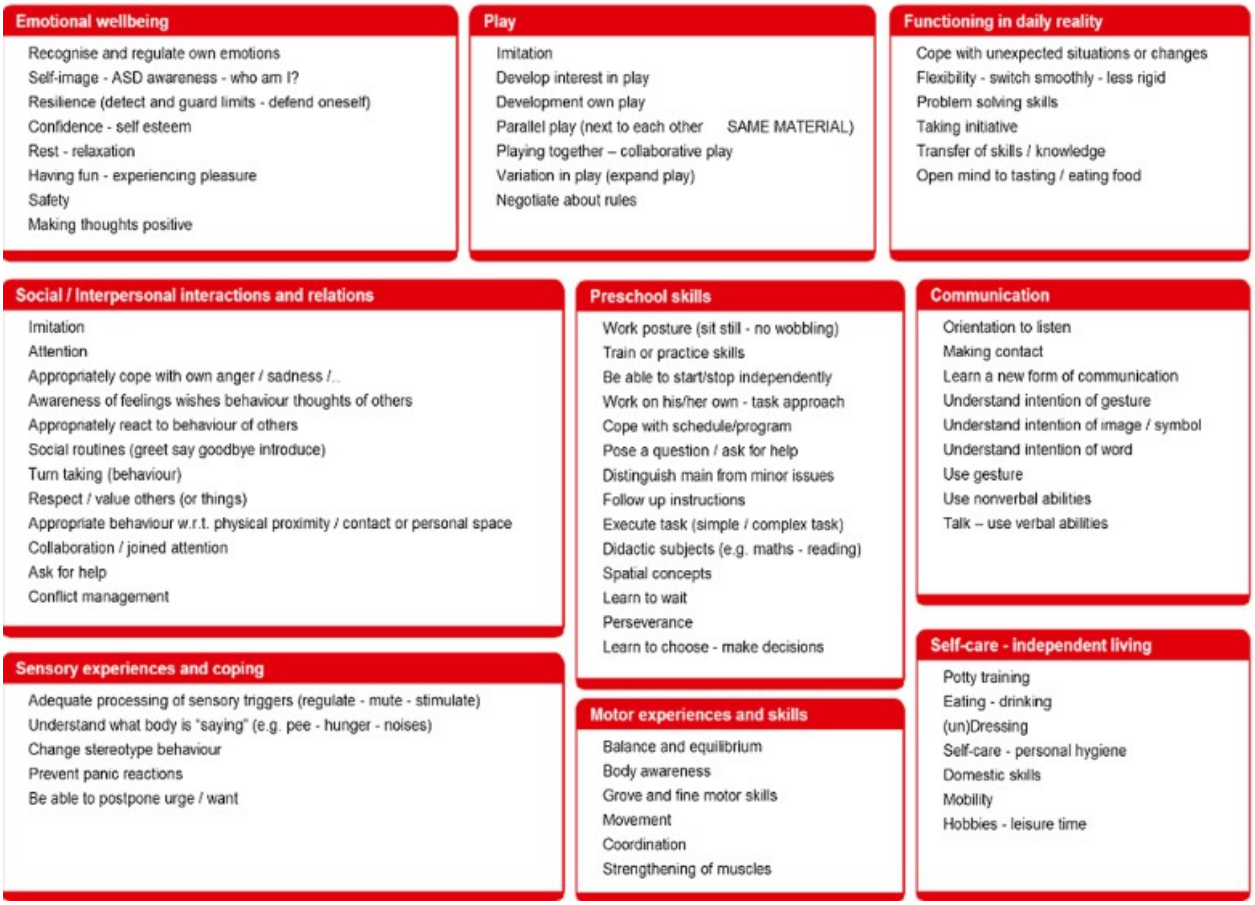
Autism Spectrum Disorder (ASD). Autism spectrum disorder [ASD] is characterised by persistent deficits in the ability to initiate and to sustain reciprocal social interaction and social communication, and by a range of restricted, repetitive, and inflexible patterns of behaviour, interests or activities that are clearly atypical or excessive for the individual's age and sociocultural context(WHO International Classification of Diseases).

Robot-mediated behaviour intervention. It is the use of robots as an assistive technology in delivering autism intervention therapies. This further means, that robots are used to engage, present, and deliver

robot executed behaviour therapy routines presented by the robot to those diagnosed on the autism spectrum. These routines address defined and targeted aspects of social interactions and learning skills development.

What the research say

- **Aymerich-Franch, L. & Ferrer, I. (2021). Socially assistive robots' deployment in healthcare settings: a global perspective.** The study provides an in-depth picture of the current state of the art of SARs' deployment in real scenarios for healthcare-related applications. It contributes to understanding better the role of these machines in the healthcare sector. Using a documentary research method, 279 experiences of SARs deployments are mapped in hospitals, elderly care centres, occupational health centres, private homes, and educational institutions worldwide from 33 different countries and involving 52 different robot models. The most widespread functions identified for these robots were entertainment, companionship, telepresence, edutainment, providing general and personalized information or advice, monitoring, promoting physical exercise and rehabilitation, and testing and pre-diagnosis. These functions show that SARs are progressively emerging as a solution to release medical staff and caregivers from some basic tasks and assist them with patients, older adults, and people with special needs in hospitals, nursing homes, and private homes, among others. Available here.



- **Claire A. G. J. Huijnen,Monique A. S. Lexis,Rianne Jansens, Luc P. de Witte (2017). How to Implement Robots in Interventions for Children with Autism? A Co-creation Study Involving People with Autism, Parents and Professionals, Journal of Autism and Developmental Disorders 47(2).** Interacting with robots can be particularly empowering for children with autism spectrum disorder (ASD) because it may overcome various barriers experienced in face-to-face interaction with humans. The study gained insight into how robots such as KASPAR can be practically implemented into current education and therapy interventions for children with ASD. In Appendix 1, an overview of ASD Therapy and Educational Objectives is presented; see Figure above.

Appendix 2 describes a robot-mediated intervention, including objectives and robot roles, intervention description, and interaction flow. Available here.

- **Rabbitt SM, Kazdin AE, Scassellati B (2015) Integrating socially assistive robotics into mental healthcare interventions: Applications and recommendations for expanded use, Clinical Psychology Review 35.** This article highlights current SAR advances and applications in mental healthcare, analyses the background information on socially assistive robotics, and shows examples of SARs. Then, it reviews the diverse and clinically relevant ways that these robots have already been used in mental healthcare, with specific emphasis on the functions that robots have served (i.e., companion, therapeutic play partner). SAR can be integrated into treatment protocols in a variety of ways. At this time, a robot used along with a human therapist is the primary way treatment has been implemented. However, potential applications of robots expand far beyond that of therapist assistants. These machines can provide therapeutic services in client homes, reaching individuals who cannot receive treatment in traditional settings (e.g., those living in rural settings, individuals housebound because of physical impairments). At some point in the future, robots will likely assume therapeutic activities previously completed by human mental health professionals. Available here.

- **Koutentakis, D. Pilozzi, A . Huang, X (2020), Designing socially assistive robots for Alzheimer's disease and related dementia patients and their caregivers: Where we are and where we are headed, Healthcare 8(2):73.** Ageing societies and the associated pressure on the care systems are major drivers for new developments in socially assistive robotics. However, as the aging population keeps growing, current medical staff and healthcare providers are increasingly burdened by caring for the ever-growing number of senior patients, especially those with cognitive impairment of Alzheimer's disease (AD) and Alzheimer's disease-related dementia (ADRD). The case study presents a robotic-based application utilizing the robot Pepper designed to support older adults and their caregivers in care homes to increase physical and cognitive activity and initiate social interaction. The results indicate that the residents were positively engaged in the training sessions moderated by the robot, but a person is needed who controls the robot. Available here.

What do national legislation and international/European treaties and conventions say on the topic?

European Commission, 2020, White Paper on Artificial Intelligence. A European approach focused on excellence and trust. Through this White Paper, the European Commission launches a wide-ranging consultation of civil society, industry, and academia in the Member States, with concrete proposals on a European approach to AI. According to the report, AI is a strategic technology that offers many benefits to citizens, businesses, and society, provided that it is human-centred, ethical, and sustainable and respects fundamental rights and values. Available here.

PRACTICAL COMPONENT

Learning Activities

Activity 1: Robots Help Autistic Kids Learn

- Watch a video on Youtube.com about the collaboration between kids with Autistic Spectrum Disorder (ASD) and SARs. Reflect on the benefits of effective teamwork between the care staff and SARs to improve the social and communication skills of children with ASD. Available here (3.19 minutes).

- Make a list of activities that can be practically implemented into current education and therapy interventions for children with ASD and share it with colleagues in the discussion area of the social platform for collaborative learning.
- Read posts of other participants and compare them with your thoughts. Then pick at least 1-2 posts by other students to reply to.
- Resources needed: YouTube video, social platform for collaborative learning.
- Duration of activity: 20 minutes.

Activity 2: How robots help healthcare workers

- Watch the video Could robots replace healthcare workers? | Lessons from Japan (available here, 6 minutes) about how robots and human carers work together for the benefit of older people and answer these questions:
- How can robots support healthcare workers to ensure patient/client care quality and make their daily work easier?
- How can robots encourage older people to be more independent and support their mental wellbeing (See the commentary from the older participants)
- Search on the Internet for other examples of assistive robots and AI devices that help people to be more independent and help their mental wellbeing. Share your findings with fellow students in the discussion area of the social platform for collaborative learning.
- Resources needed: YouTube video , social platform for collaborative learning.
- Duration of activity: 20 minutes.

ASSESSMENT COMPONENT

Assessment Activities

Activity 1: Fill blank spaces.

- Complete the blanks in the sentences bellow with the words from the right column.
- Resources needed: Word or similar software for writing, pen or pencil.
- Duration of activity: 3 minutes.

1. Healthcare-related applications of IA and assistive robots will likely be capable of assuming some intervention previously completed by humans and support ..... in their daily work. 2. Effective teamwork between the health staff and SARs ensure the quality of ..... care. 3. Through the collaboration between the autistic kids, staff, and SARs in the robot-mediated behavior intervention, there are improvements in social and communication skills of children with ..... . 4. Socially assistive robotics can be integrated into mental healthcare interventions for older patients, especially those with cognitive impairment of ..... disease. 5. The collaboration between the patient/client and SARs encourages older people to be more independent and helps with their	a) patients/clients b) wellbeing c) health professionals d) Alzheimer e) Autism Spectrum Disorder(ASD)

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EVALUATION COMPONENT

Participants to evaluation

The online evaluation questionnaire of each Learning unit is completed by the MOOC participants (students and student/facilitators) on Survey Monkey

What to evaluate

The Learning Unit's evaluation criteria are: coverage of the identified learning needs, innovation, quality of the content and training materials, intuitive and friendly presentation, relevance of learning activities, and efficiency for achieving established learning outputs.

Please, complete this online evaluation of the learning unit by clicking on this link:

https://www.surveymonkey.com/r/LRPK23P